

SECRET

Approved For Release 2005/06/23 : CIA-RDP78B04770A002700040021-7

997536

NPIC/P&DS/D/6-742
25 January 1966

MEMORANDUM FOR THE RECORD

SUBJECT: NSA Liaison

Declass Review by NGA.

REFERENCE: Project No. 997536

25X1 [] and the undersigned visited this installation on 11 January 1966. The purpose of this visit was to obtain knowledge of the state-of-the-art of viewing and/or converting various video tape formats in response to NPIC's Video Tape/Hard Copy requirement. Reference letter dated 6 December 1965, NPIC/CSD-625-65.

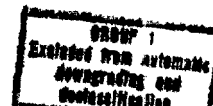
25X1
25X1 N.S.A. is neither adopted to nor particularly interested in Video Tape, per se. Consequently, equipment was modified for other purposes and was not suited for the best presentation of T.V. imagery. Mr. [] of N.S.A. demonstrated an RCA-TR-22 unit (Cost [] which is capable of playing any Video Tape, foreign or domestic, that is recorded with a transverse system. This equipment is initially aligned with a standard tape. Variations of the tape to be read to the standard tape are noted, then adjustments are made for the best read of that particular recording. However, this equipment was not capable of a stop motion or single frame presentation which would be required for studying or producing hard copy for a series of events or for a particular single frame. A standard T.V. program was recorded on the RCA-TR-22. The Video Taped imagery was compared for quality with the original broadcast as it was occurring at that time. A slight but definite image degradation was readily apparent. [] indicated that most of the jitter, fuzziness, etc., responsible for most of the image degrading could be overcome by re-inserting the sync signal in the play back equipment.

A Video Disc T.V. Disc Recorder [] was recommended as the best solution to a continuous frame display requirement. This unit will allow the selection of a particular series of frames or of a particular single frame for an unlimited replay with practically no image degradation due to wear. This unit would be applicable to both transverse and helical scan Video Tape.

25X1 An [] VR-660 (a helical scan recorder), which had been modified for 625 scan line/50 cycle frame rate TV, was shown but was not in operational condition and could not be demonstrated. Indications were that the modification was not very successful.

Approved For Release 2005/06/23 : CIA-RDP78B04770A002700040021-7

SECRET



SECRET

Approved For Release 2005/06/23 : CIA-RDP78B04770A002700040021-7

SUBJECT: NSA Liaison

The following points concerning helical video tape recorders should be considered and kept in mind.

(a) There are no set standards for helical scan video tape recording, ergo, recordings made on one manufacturer's equipment are not compatible with another manufacturer's. Due to wear and individual manufacturing variations, from a quality point of view, it would be preferable to view helical scan video tapes on the same piece of equipment that made the recording.

(b) Separate tape decks, i.e., recorders, are required for various frame rate TV systems. A 50 cps frame rate recording would have to be recorded and played on a mechanism that is not compatible with 60 cps frame rate recording.

(c) Although helical scan video tape equipment have stop-motion capabilities, the quality of the image in the monitor is drastically reduced during a stop motion mode. This is primarily caused by the fact that the magnetic tape is no longer in motion. The change from a dynamic to a static state causes the read-head to be slightly misaligned, not so much as to preclude sensing, but enough to degrade the image on the monitor considerably. Additionally, the magnetic tape is physically damaged by the continuous reading and re-reading of a single frame. It is very difficult to stop the play back exactly on the frame. Part of the preceding or following frame are usually obtained and considerable jockeying is required to stop exactly on the frame. In actuality, the stop-frame feature of helical recorders is a very limited capability.

A special purpose unit built by [] for processing a digitized TV signal was seen and discussed. This is a fairly high resolution TV system but is extremely slow due to the digitized nature of the input. The equipment produces a conventional silver transparency hard copy (2 solution process) using a unique cylindrical TV screen for imprinting the imagery. Since the imagery presented is a series of still photos rather than images in motion, a continuous scan technique is used rather than the standard commercial interlaced scan system.

25X1

In reference to NPIC's requirements, i.e., to be capable of viewing any video tape that the center might receive and to be able to extract high quality stills from these inputs, it appears at the present time that various involved and complicated equipment will be required.

The canvassing of the commercial market and of other governmental agencies will be continued until more definite recommendations can be made.

25X1

Distribution: Orig.-#997536 []

1-Chrono/DB

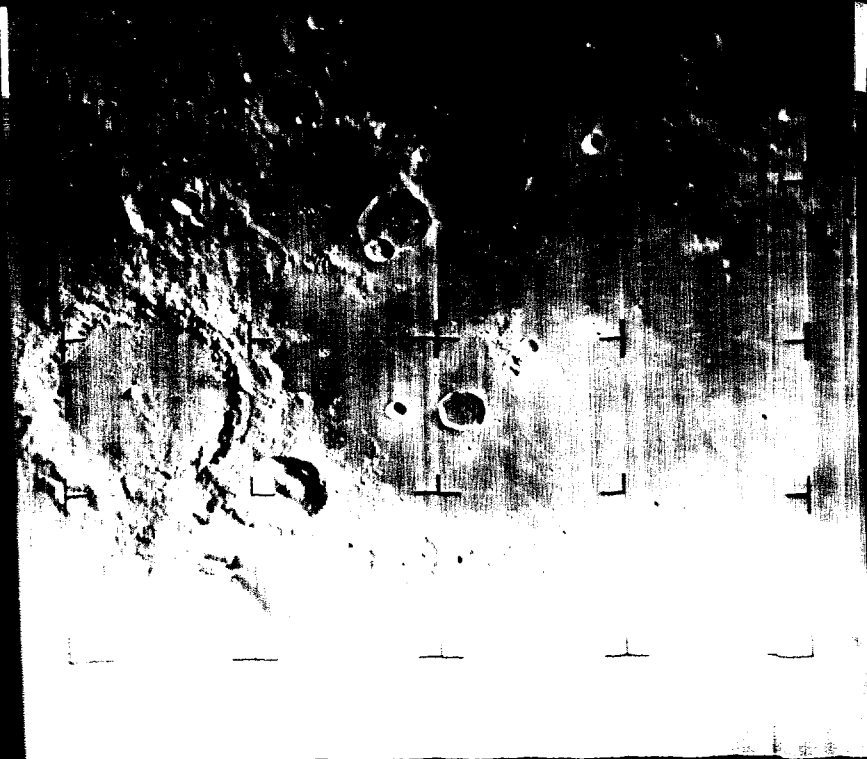
25X1

Approved For Release 2005/06/23 : CIA-RDP78B04770A002700040021-7

SECRET

ved

DIGITIZED TV-FROM MAG TAPE OF RANGER



TAPE PROCESSED

25X1



Re hand copy T.V.

Handle list memo with
discretion, please.

A handwritten signature or set of initials, possibly 'R' or 'K', written in ink.

UNCLASSIFIED	CONFIDENTIAL	SECRET
CENTRAL INTELLIGENCE AGENCY OFFICIAL ROUTING SLIP		
	DATE	INITIALS
	13 JAN 1966	<i>[Signature]</i>
5		
6		
ACTION	DIRECT REPLY	PREPARE REPLY
APPROVAL	DISPATCH	RECOMMENDATION
COMMENT	FILE	RETURN
CONCURRENCE	INFORMATION	SIGNATURE
Remarks: <i>Thank - for your follow-up</i> <i>action letter</i>		
FOLD HERE TO RETURN TO SENDER		
FROM: NAME, ADDRESS AND PHONE NO.		DATE
		3 Jan 66
UNCLASSIFIED	CONFIDENTIAL	SECRET

FORM NO. 2-61 237 Use previous editions

(40)
* U.S. GOVERNMENT PRINTING OFFICE : 1961 O-587282

FROM: *Chief, CSD*

DATE: *20DEC*

	TO	INITIALS	DATE	REMARKS
DIR				
DEP/DIR				
EXEC/DIR				
TECH ADV	✓	<i>JWC</i>		
ASST FOR ADMIN				
CH/SS				
CH/MSS				
ASST FOR OPS				
ASST FOR PA				
ASST FOR P&D	✓	<i>[Signature]</i>		
CH/CSD		<i>[Signature]</i>		
CH/IPD		<i>[Signature]</i>		
CH/PSD				
CH/TID		<i>[Signature]</i>		
CH/CIA/PID				
CH/DIA/XX-4				
CH/DIA/AP-IP				
CH/SPAD				
LO/CGS/CIA				
LO/NSA				

FOR YOUR INFORMATION - ADDITIONAL INFORMATION ON THE VIDEO TAPE PROBLEM - THIS INFORMATION WILL BE DISCUSSED WITH [Redacted]

In addition, I left [Redacted]

names, initials, etc with [Redacted] per [Redacted]

Follow up request of AEL - [Redacted]

25X1

25X1

25X1

25X1

25X1